

REMARKS/ARGUMENTS

1. Rejection of claims 1-12:

Claims 1-12 are rejected under 35 U.S.C 103(a) as being unpatentable over U.S. Patent No. 6,736,306 to Byun et al. Reasons for rejection are shown in page 5-8 of the above-mentioned Office Action.

Response:

To claim the present application in a more clear and specific way, claim 1 has been amended to show the specificity and differences between the present application and Byun's patent. Currently amended claim 1 is repeated as follows.

Claim 1 (Currently amended): A semiconductor package which is positioned on a first substrate comprising:

a second substrate having a first surface and a second surface;

a chip positioned on the first surface of the second substrate;

a plurality of first bonding balls positioned on the second surface of the second substrate and arranged **in a single row** along a first direction for connecting the second substrate to the first substrate; and

at least a dummy bonding bar positioned on the second surface of the second substrate for connecting the second substrate to the first substrate and preventing the semiconductor package from inclining to one side, wherein **the dummy bonding bar and the first bonding balls are arranged in the same line**.

As the chip size reduced, packages for the chips have to reduce to satisfy the requirement of smaller package size. In [0006], applicant reveals the inclining problem if the package only has a single row of bonding balls. Hence, the present invention solves the inclining problems of the semiconductor package, especially to a tiny semiconductor package, which **only has a single row of bonding balls** between the second substrate and the PCB.

Consequently, at least a dummy bonding bar to stabilize the balance of the structure is disposed in the same row of the bonding balls on the second surface of the second substrate.

However, the bonding balls of Byun's patent are arranged in a rectangular array having 5 at least two parallel rows. Beyond doubt, the inclining problem will not occur. Byun never discloses a package having only a single row of bonding balls or suggest a solution for resolving inclining problem when the package only has a single row of bonding balls. The dummy bonding pads of Byun's patent are formed along the outer edges of the substrate enhances the join force between the first substrate 150 and the second substrate 120 and 10 prevents the occurrence of cracks of those bonding balls. To interpret the function of joint force enhancement as the function of preventing inclining to one side is a forced interpretation. Byun never infers the connection terminal 162 can be used as means of preventing inclining problems. On the other hand, the relative position between the bonding balls and the dummy bonding bars may be modified as the dummy bonding bars being 15 disposed between the bonding balls (Fig. 7 of the present application). The position of the dummy bonding bars is not limited along the outer edges of the substrate as Byun's.

According to above reasons, claim 1 should be allowable. Claims 2-12 are dependent on 20 claim 1 and should be allowable if claim 1 is allowed. Reconsideration of claims 1-12 is politely requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Appl. No. 10/710,399
Amdt. dated October 03, 2006
Reply to Office action of June 9, 2006

Sincerely yours,



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